All India Mock for SBI PO Prelims 2023 (21-22 October)

Directions (1-4): In the following questions, a grammatically correct and meaningful sentence is given which is divided into four parts namely (A), (B), (C) and (D). You have to arrange the four parts to make a contextually and grammatically meaningful sentence. If no such rearrangement is needed, mark (e) as your answer i.e. 'No rearrangement required'.

Q1. One of the oldest of the (A)/ ayurveda is considered as (B)/ medicine accepted worldwide (C)/ traditional systems of (D).
(a) DBAC
(b) BADC
(c) CDAB
(d) ADCB
(e) No rearrangement required

Q2. Moderate warmth was (A)/ needed, such as China and Japan (B)/ wood was the earliest fuel used (C)/ in places where only (D)
(a) CDBA
(b) BCAD
(c) CDAB
(d) ADCB
(e) No rearrangement required

Q3. In medicine to provide (A)/ to keep abreast of evolving knowledge (B)/ all practitioners of medicine need (C)/ competent care to patients (D)
(a) DBAC
(b) BCAD
(c) CDAB
(d) CBAD
(e) No rearrangement required

Q4. Every day, thousands of (A)/ travel books to fictional books(B)/ books are released in (C) the market ranging from (D)
(a) DBAC
(b) BCAD
(c) ACDB
(d) ADCB
(e) No rearrangement required

Directions (5-9): Each question below has one blank, which is indicating that something has been omitted. Find out which word from option can be used to fill up the blank to complete it meaningfully.

Q5. Some volcanic eruptions are_____, while others occur as a slow lava flow.
(a) renouncing
(b) obstructive
(c) baffling
(d) explosive
(e) trembling

Q6. Greenhouse gases are _____ to sunlight, and thus allow it to pass through the atmosphere.
(a) coarse
(b) transparent
(c) ambiguous
(d) reflect
(e) malicious.

Q7. There are a/an _____ of items which are unique in Kashmir.
(a) coercion
(b) incumbent
(c) array
(d) atrocity
(e) stark

Q8. Jupiter's atmosphere _____ that of the sun, made up mostly of hydrogen and helium.
(a) mitigate
(b) fraught
(c) overlook
(d) revert
(e) resembles

Q9. Groundwater is at risk from both geogenic and bacterial_____.
(a) contamination
(b) mishaps
(c) ferocity
(d) catastrophic
(e) amalgamation

Directions (10-16): Read the given passage carefully and answer the following questions. Certain parts have been highlighted to help answer the questions.

Submarine, any naval vessel that is capable of propelling itself beneath the water as well as on the water's surface. This is a unique capability among warships, and submarines are quite **different** in design and appearance from surface ships. Submarines first became a major factor in naval warfare during World War I, when Germany employed them to destroy surface merchant vessels. In such attacks submarines were used as their primary weapon, a self-propelled underwater missile known as a torpedo.

The first serious discussion of a "submarine" appeared in 1578 from the pen of William Bourne, a British mathematician and writer on naval subjects. Bourne proposed a completely enclosed boat that could be submerged and rowed underwater. It consisted of a wooden frame covered with waterproof leather; it was to be submerged by reducing its volume by contracting the sides through the use of hand vises. Bourne did not actually construct his boat, and Cornelis Drebbel, a Dutch inventor, is usually credited with building the first submarine. Between 1620 and 1624 he successfully maneuvered his craft at depths of from 12 to 15 feet beneath the surface during **repeated** trials in the Thames River, in England.

A major limitation of the early submarines was their lack of a suitable means of propulsion. In 1880 an English clergyman, George W. Garrett, successfully operated a submarine with steam from a coal-fired boiler that featured a retractable smokestack. The fire had to be extinguished before the craft would submerge, but enough steam remained in the boilers for traveling several miles underwater. In an effort to overcome the problems of propulsion, two French naval officers built the 146-foot submarine Le Plongeur in 1864, powered by an 80-horsepower compressed-air engine, but the craft quickly exhausted its air tanks whenever it got under way. Development of the electric motor finally made electric propulsion practicable.

Q10. What make submarines different from surface ships?
(a) Carrying capacity of surface ships is far more than the submarine's capacity
(b) Submarines are the watercraft vessels capable to operate both on the surface and the depth of the sea.
(c) Surface ships need electric power to run while submarines use diesel.
(d) Submarines are made up of heavyweight material to make them sinkable.
(e) None of these

Q11. What was the purpose of the commencement of the submarine by German naval?
(a) To facilitate sea trade among tropical countries
(b) To attack surface merchant vessels during World war I
(c) To explore the various unknown species under oceans
(d) For tourism and sea adventure purposes.
(e) None of these

Q12. What was/were the construction tips by Bourne for making submarines?
(a) Ship should have wooden fixture with water-repellent leather
(b) The underwater boat should be closed off on all sides
(c) Reduction in size of sides through the use of hand vises
(d) Volume should be minimized compared to other boats
(e) All of these

Q13. Which was/were the means of propulsion that had been used in submarines?
(a) electric motor
(b) compressed air engine
(c) steam from a coal-fired boiler
(d) All of these
(e) None of these

Q14. Which of the following statements is/are **Incorrect** with reference to the paragraph?
(i) Cornelis Drebbel, a Spanish inventor constructed the first submarine.
(ii)Le Plongeur submarine was constructed by two French naval officers in 1684.
(iii)During World War I, the torpedo was the primary weapon of the German naval.
(a) Only (ii)
(b) Only (iii)
(c) Both (i) and (ii)
(d) Both (ii) and (iii)
(e) Only (i)

Q15. Which of the following words is a synonym of '**repeated**'?
(a) revolved
(b) reinforced
(c) retracted
(d) recurrent
(e) None of these

Q16. Which of the following words is an antonym of '**different**'?
(a) colossal
(b) analogous
(c) mount
(d) conspire
(e) None of these

Directions (17-21): Each of the sentence given below has been divided in four parts which may or may not be correct. Choose the part that contains an error as your answer choice. If no such part has any error, choose "No Error" as your answer.

Q17. India mainly depends on (A)/wheat for its daily meals (B)/ despite of many other kinds (C)/ of cereal available globally (D)/ No Error (E)
(a) B
(b) C
(c) D
(d) A
(e) No Error

Q18. He will return back (A)/ to India after (B)/ completing his degree (C)/ this year (D)/ No Error.
(a) A
(b) B
(c) C
(d) D
(e) No Error

Q19. All the interesting (A)/ employees should (B)/ be invited and (C)/involved in discussion (D)/ No Error (E).
(a) B
(b) D
(c) A
(d) C
(e) No Error

Q20. If he has come here, (A)/ I would have given (B)/him the amount he (C)/needed to pay his fees. (D)/ No Error (E).
(a) A
(b) B
(c) C
(d) D
(e) No Error

Q21. The Chinese produced (A)/ primarily cast coinage, (B)/ and this spread to (C)/ South-East Asia and Japan (D)/ No Error (E)
(a) D
(b) C
(c) B
(d) A
(e) No Error

Directions (22-26): Two columns are given with few sentences/phrases in each which are grammatically correct and meaningful. Connect them in the best possible way without changing the intended meaning. Choose the best possible combination as your answer accordingly from the options to form a correct, coherent sentence.

Q22. COLUMN (I)
(A) A company that seems to have had no
(B) The best-known benefit of sunlight is its
(C) The consumption of petroleum products
COLUMN (II)
(D) has increased sharply in the last decades
(E) fixing of accountability must follow quickly.
(F) ability to boost the body's vitamin D supply
(a) Only (A)-(D) and (C)-(F)
(b) Only (B)-(F)
(c) Only (B)-(F) and (C)-(D)
(d) Only (A)-(D)
(e) None of these

Q23. COLUMN (I)
(A) It is in such a backdrop that the use
(B) When you work on a computer, your
(C) Looking for remedies to the underlying causes
COLUMN (II)
(D) methods and processes of the state
(E) with an alternative point of view.
(F) eyes have to focus and refocus all the time.
(a) Only (A)-(D) and (C)-(F)
(b) Only (B)-(F)
(c) Only (B)-(F) and (C)-(D)
(d) Only (A)-(D)
(e) None of these

Q24. COLUMN (I)
(A) Susan was staying up late to watch again
(B) The principles of liberty and equality are not to an
(C) The cause of lethargy may be clear based on its
COLUMN (II)
(D) seen as an emotion rather than a principle.
(E) even though she knows the movie by heart
(F) pattern and accompanying symptoms
(a) Only (A)-(D) and (C)-(F)
(b) Only (B)-(F)
(c) Only (B)-(F) and (C)-(D)
(d) Only (A)-(E) and (C)- (F)
(e) None of these

Q25. COLUMN (I)
(A) In smaller mines with less regulation,
(B) It is economic on one plane and
(C) The term low and middle-income country
COLUMN (II)
(D) is often used interchangeably
(E) social cohesion in segments of society.
(F) health and safety risks are much higher
(a) Only (A)-(F) and (C)-(D)
(b) Only (B)-(F)
(c) Only (B)-(F) and (C)-(D)
(d) Only (A)-(D)
(e) None of these

Q26. COLUMN (I)
(A) As the results are known even before
(B) There is no certainty that a partial set of
(C) The president is responsible for chairing
COLUMN (II)
(D) given to the first two listed organizations
(E) make loans and demand policy reforms
(F) meetings of the boards of directors
(a) Only (A)-(F) and (C)-(D)
(b) Only (C)-(F)
(c) Only (A)-(F)
(d) Only (A)-(D)
(e) None of these

Directions (27-30): A word has been given in each question and has been used in the sentences given below. Identify the statements where the word has been used in a contextually and grammatically correct manner.

Q27. Execute
(i) If there is an **execute** constraint, a solution must be sought.
(ii) Every day you fail to **execute** the task, the penalty for failure worsens.
(iii) A debtor who is not insolvent may also **execute** a deed in favor of his creditors generally.
(a) All of these
(b) Only (i)
(c) Both (ii) & (iii)
(d) Both (i) & (ii)
(e) Only (iii)

Q28. Fuming

(i) The man was **fuming** after a gold chain was stolen from his hotel room.

(ii) The Husband was **fuming** when his wife refused to follow family rituals.

(iii) The company earned the highest revenue ever which made the CEO very **fuming**.

(a) All of these

(b) Only (i)

(c) Both (ii) & (iii)

(d) Both (i) & (ii)

(e) Only (iii)

Q29. Timid

(i) Heavy rainfall during the last week brought the city to a **timid**.

(ii) Many countries have not significantly improved their **timid** in the Ocean region

(iii) The girl's voice was **timid** and raspy, no more than a whisper.

(a) All of these

(b) Only (i)

(c) Both (ii) & (iii)

(d) Both (i) & (ii)

(e) Only (iii)

Q30. Invent

(i) The changes were **invent** about with the goal of making voting more universal

(ii) William Higginbotham was the first American to **invent** a video game.

(iii) Applicability of fire safety norms is another gap through which several builders **invent**.

(a) Only (ii)

(b) Only (i)

(c) Both (ii) & (iii)

(d) Both (i) & (ii)

(e) Only (iii)

Directions (31-35): Bar graph given below shows percentage distribution of total number of plants (Jade and Lily) in five (P, Q, R, S & T) different gardens and percentage of Jade plants in these gardens. Read the following bar graph carefully and answer the questions given below.

■ Percentage distribution of total number of plants   ■ Percenatge of Jade plants
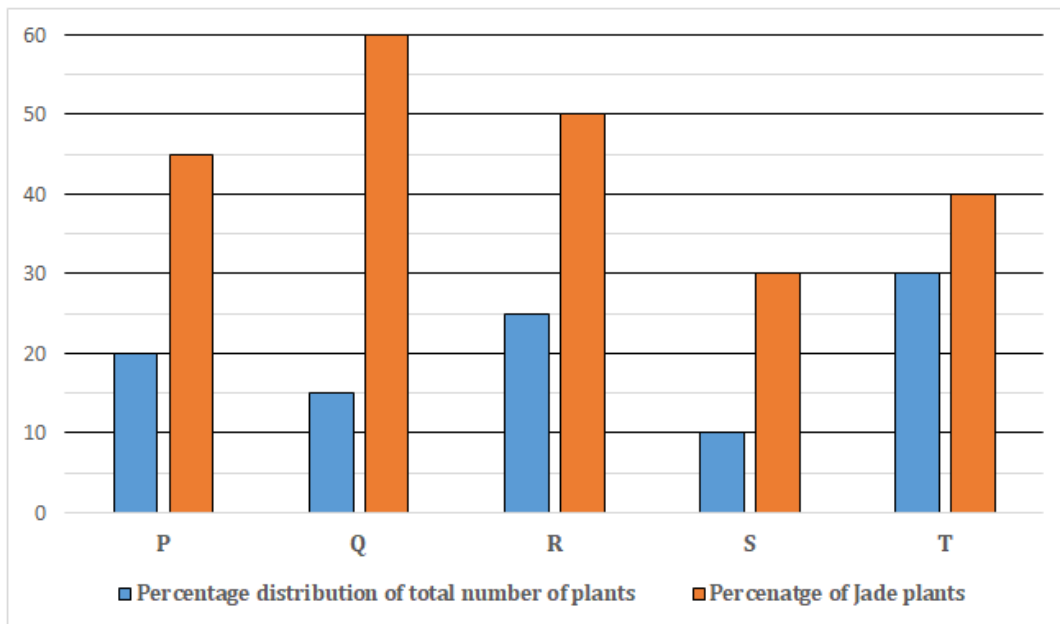
Q31. If number of lily plants in R is 600, then find the total number of jade plants in P and S together.
(a) 488
(b) 576
(c) 502
(d) 452
(e) 492

Q32. If difference between number of jade plants in Q and T are 72, then find the number of lily plants in P.
(a) 264
(b) 282
(c) 276
(d) 298
(e) 244

Q33. Total number of plants in X is 25% more than that of S and number of jade plants in Q is 108. If ratio of number of lily plants in X to P is 2:3 respectively, then find the number of jade plants in X.
(a) 67
(b) 60
(c) 68
(d) 66
(e) 62

Q34. If total number of plants in T are 90, then find the average number of jade plants in S and Q together.
(a) 20
(b) 12
(c) 14
(d) 18
(e) 22

Q35. The number of aloevera plants in P are 28% of number of jade plants in R. If number of lily plants in T are 432, then find the ratio of number of jade plants in Q to number of aloevera plants in P.
(a) 10:11
(b) 14:17
(c) 17:15
(d) 19:9
(e) 18:7

Directions (36-40): In each of these questions, two equation (I) and (II) are given. You have to solve both the equations and give answer.

Q36.
I. $x^2 - 4x - 21 = 0$
II. $y^2 - 15y + 56 = 0$
(a) If x > y
(b) If x ≥ y
(c) If x < y
(d) If x ≤ y
(e) If x = y or no relation can be established between x and y

Q37.
I. $2x^2 - 17x - 19 = 0$
II. $3y^2 + 8y - 11 = 0$
(a) If x > y
(b) If x ≥ y
(c) If x < y
(d) If x ≤ y
(e) If x = y or no relation can be established between x and y

Q38.
I. $7x^2 - 18x - 25 = 0$
II. $9y^2 - 15y - 14 = 0$
(a) If x > y
(b) If x ≥ y
(c) If x < y
(d) If x ≤ y
(e) If x = y or no relation can be established between x and y

Q39.
I. $x^2 - 57 = 304$
II. $y = \sqrt{361}$
(a) If x > y
(b) If x ≥ y
(c) If x < y
(d) If x ≤ y
(e) If x = y or no relation can be established between x and y

Q40.
I. $x = \sqrt{(18 \times 4) - 16 \div 2}$
II. $y^2 = 13y - 42$
(a) If x > y
(b) If x ≥ y
(c) If x < y
(d) If x ≤ y
(e) If x = y or no relation can be established between x and y

Directions (41-45): Read the given information carefully and answer the questions.
There are 450 people in a society and also like three (X, Y and Z) different types of foods. The ratio of total number of people who like only food X, only food Y and only food Z is 5 : 7 : 3 respectively. People who like all three foods are 50% of the people like only food Y. The sum of people who like only food Y & food Z and who like only food X & food Y is 50. People who like only food X & food Z is 30.

Q41. Find the sum of number of people who like only food Z and only food X?
(a) 178
(b) 152
(c) 146
(d) 124
(e) 160

Q42. Find the difference between number of people who like only food Y and number of people who like only food X & food Y?
(a) 21
(b) 26
(c) 19
(d) Can't be determined.
(e) None of these

Q43. If the ratio of number of people who like only food X & food Y to number of people who like only food Y & food Z is 2 : 3, then find the ratio of number of people who like food X to that of Z.
(a) 22:19
(b) 22:21
(c) 22:27
(d) 22:29
(e) 22:25

Q44. Find the number of people who like at least two foods?
(a) 155
(b) 220
(c) 180
(d) 150
(e) 240

Q45. Number of people who like only food Z is what percent of number of people who like only food X?
(a) 45%
(b) 60%
(c) 50%
(d) 75%
(e) 62.5%

Q46. Time taken by boat to cover 100 km distance from point A to point B against the stream and come back to initial point A in 30 hours. If speed of boat in still water is 12 km/h, then find the speed of stream.
(a) 8 km/h
(b) 4 km/h
(c) 6 km/h
(d) 9 km/h
(e) 11 km/h

Q47. 2/3rd of the present age of Y is equal to 3/5th of present age of Z and sum of present age of X and Z is 90 years. If X is 10 years younger than Z, then find the age of X after four years.
(a) 18 years
(b) 28 years
(c) 25 years
(d) 45 years
(e) 44 years

Q48. A mark an article 60% above its cost price. When he allows 4d% discount on marked price he earns 28% profit. If he allows 6d% discount, then find the profit/ or loss %.
(a) 12%
(b) 15%
(c) 18%
(d) 20%
(e) 24%

Q49. P and Q started a business by investing Rs. (X+6000) and Rs. 6000 respectively. After eight months Q left the business & R joined with an investment of 50% of the initial investment of P. If at the end of one-year R received profit of Rs.2200 out of total profit of Rs.20200, then find the value of X.
(a) 7450
(b) 4650
(c) 6200
(d) 5000
(e) 5400

Q50. The height, length and breadth of a room are 20 meter, 8x meters & 6x meters respectively. The cost of painting the all four walls of the room at RS.40/m^2 is Rs.44800. Find the breadth of the room.
(a) 10 meters
(b) 12 meters
(c) 16 meters
(d) 8 meters
(e) 14 meters

Directions (51-55): What will come in the place of question (?) mark in following number series:

Q51. 19, 22, 51, 178, ?, 1254
(a) 452
(b) 250
(c) 523
(d) 653
(e) 981

Q52. 205, ?, 148, 91, 15, -80
(a) 88
(b) 72
(c) 145
(d) 186
(e) 110

Q53. 14, 20, 28, 40, 60, ?
(a) 102
(b) 99
(c) 77
(d) 64
(e) 96

Q54. 45, 59, 79, 106, ?, 185
(a) 121
(b) 111
(c) 141
(d) 151
(e) 161

Q55. ?, 24, 24, 36, 72, 180
(a) 12
(b) 36
(c) 72
(d) 6
(e) 48

Directions (56-60): Table shows total number of students (Boys and Girls) in five (A, B, C, D & E) schools and percentage of number of boys in these schools. Read the following table carefully and answer the questions given below.

Schools	Total number of students	Percentage of boys
A	550	60%
B	480	37.5%
C	600	32.5%
D	780	40%
E	700	$57\frac{1}{7}\%$

Q56. Students in C participated in two games i.e. cricket and volleyball. If the ratio of girls participated in cricket to volleyball is 5:4 and boys participated in cricket are 80% less than that of girls, then find the sum of students who participated in volleyball in school C.
(a) 320
(b) 370
(c) 350
(d) 330
(e) 380

Q57. Find the ratio of number of girls in school D to number of boys in school A.
(a) 79:51
(b) 77:54
(c) 73:52
(d) 75:59
(e) 78:55

Q58. If 25% boys and 40% girls in school B transferred to school D, then find the difference between number of boys and number of girls in school D.
(a) 298
(b) 258
(c) 210
(d) 231
(e) 284

Q59. If number of girls in school X is 72% of girls in school E and ratio boys in school X to that in school B is 31:36, then find the total number of students in school X.
(a) 371
(b) 380
(c) 359
(d) 342
(e) 378

Q60. Average number of boys in schools A, B & D is what percent total number of girls in school E?
(a) $89\frac{1}{3}\%$
(b) $91\frac{1}{3}\%$
(c) $78\frac{1}{3}\%$
(d) $64\frac{1}{3}\%$
(e) $104\frac{1}{3}\%$

Q61. X reads 20% of book in first day and 25% of the remaining on second day. If 180 pages are remaining to read, then how many pages does the book contains.
(a) 320
(b) 450
(c) 350
(d) 400
(e) 300

Q62. A invests Rs.5600 on simple interest at R% for four years and he invested Rs.4800 on compound interest at 10% p.a. for two years. If the difference between simple interest and compound interest is Rs.672, then find the value of (R+2.5).
(a) 7.5
(b) 8
(c) 7
(d) 10
(e) 12

Q63. X and Y alone can complete a work in 20 days and 28 days respectively. Efficiency of Z is $28\frac{4}{7}\%$ more than that of X and efficiency of W is 20% more than that of Y. If Z works $11\frac{1}{9}\%$ more and Y works with 20% less than their usual efficiencies, then find the time taken by Y, Z & W together to complete the whole work.
(a) 2 days
(b) 7 days
(c) 5 days
(d) 9 days
(e) 8 days

Q64. A certain liter of mixture of milk and water are in the ratio of 8:5 respectively. If 15 liters of milk is added and same quantity of water is taken out, then ratio of milk to water in the final mixture becomes 2:1 respectively. Find the 40% of the initial quantity of the milk.
(a) 49 liters
(b) 40 liters
(c) 58 liters
(d) 64 liters
(e) 72 liters

Q65. The average height of 24 students in a class is 162 cm. If the ratio of height of first eighteen students and last six students is 2:3 respectively, then find the total height of last six students.
(a) 220 cm
(b) 216 cm
(c) 240 cm
(d) 202 cm
(e) 242 cm

Directions (66-70): Study the following information carefully and answer the questions given below.
Nine boxes are kept one above the another such that the bottommost box is numbered as 1, just above it is numbered as 2 and so on till the topmost box is numbered as 9. Four boxes are kept between box V and box D which is kept just above box K. Box V is numbered as the multiple of 3. Number of boxes are kept above box A is same as the number of boxes are kept below box Y. Box Y is kept three places below box Q which is not kept at the topmost position. More than four boxes are kept between box S and box M which is kept below box C but not just below.

Q66. Which of the following box is kept just above and just below box C respectively?
(a) Box Q, box S
(b) Box V, box A
(c) Box Y, box K
(d) Box A, box Q
(e) Box S, box Q

Q67. Number of boxes kept below box K is same as the number of boxes kept above___?
(a) Box C
(b) Box Y
(c) Box S
(d) Box M
(e) Box V

Q68. How many boxes are kept between box M and box D?
(a) None
(b) One
(c) Three
(d) Two
(e) Four

Q69. If all the boxes are arranged according to the English alphabetical order from top to bottom, then how many boxes will remain at same place?
(a) None
(b) One
(c) Two
(d) Three
(e) More than three

Q70. Which of the following box is kept two places below box A?
(a) Box Y
(b) Box C
(c) Box M
(d) Box Q
(e) Box D

Q71. How many pairs of letters are there in the word '**EXTINGUISH**', each of which have as many letters between them as in English alphabetical series (both forward and backward direction)?
(a) One
(b) Three
(c) None
(d) Two
(e) More than three

Directions (72-76): Study the following information carefully and answer the questions given below.
Eight persons sit in a row such that some of them facing towards north direction and some of them facing towards south direction. Not more than two adjacent persons face same direction. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. Four persons sit between K and G and both of them face same direction. R sits 2nd to the right of J. W sits 3rd to the right of G. R and P face same direction. R and W doesn't sit adjacent to each other.

Q72. How many persons sit between P and E?
(a) Three
(b) One
(c) None
(d) Two
(e) None of these

Q73. Who sits 2nd to the right of R?
(a) W
(b) E
(c) P
(d) J
(e) None of these

Q74. Four of the following five are alike in a certain way and forms a group, then who among the following doesn't belong to that group?
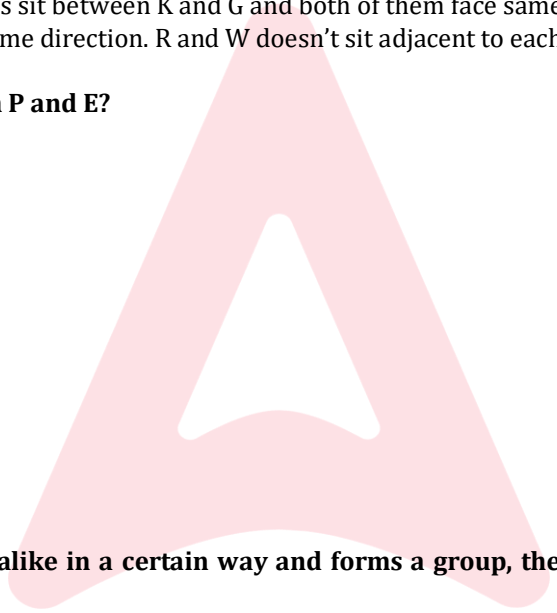(a) R
(b) K
(c) E
(d) G
(e) P

Q75. What is the position of R with respect to P?
(a) 2nd to the left
(b) 3rd to the right
(c) Immediate right
(d) Immediate left
(e) Can't be determined

Q76. How many persons face south direction?
(a) Three
(b) Five
(c) Four
(d) Two
(e) None of these

Directions (77-81): Study the following numeric series and answer the questions given below.
913 586 334 269 772

Q77. If the second and third digits of each number are added then the resulting sum of which number will be divisible by 5 (first digit is removed from each number)?
(a) 586
(b) 913
(c) 772
(d) 269
(e) 334

Q78. If in each number, the position of second and third digits are interchanged then how many odd numbers will be formed?
(a) Two
(b) Three
(c) None
(d) One
(e) Four

Q79. If in each number all digits are arranged in ascending order from left to right, then which of the following will be the highest?
(a) 586
(b) 913
(c) 772
(d) 269
(e) 334

Q80. If in each number, the position of first and third digits are interchanged, then how many even numbers will be formed?
(a) 2
(b) 3
(c) 5
(d) 1
(e) 4

Q81. If in each number all digits are arranged in descending order from left to right, then which of the following number will be the second lowest?
(a) 586
(b) 913
(c) 772
(d) 334
(e) 269

Q82. If in the given number "**5375490356**", the 1st digit is interchanged with the 2nd digit, 3rd digit with the 4th digit and so on till 9th digit with 10th digit. After that, what will be the difference between the 5th digit from left end and 5th digit from right end of the number thus formed after rearrangement?
(a) 6
(b) 1
(c) 4
(d) 7
(e) 5
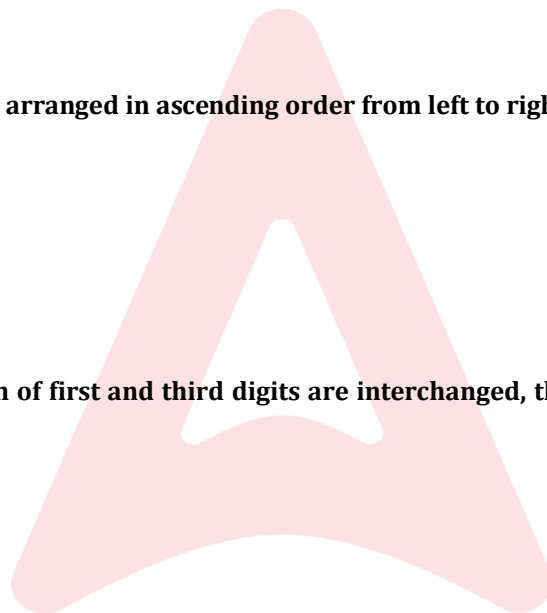
Directions (83-87): Study the following information carefully and answer the questions given below.
Nine persons from A to I live on different floors of a nine-storey building (but not necessarily in the same order) such that the bottommost floor is numbered as 1, just above it is numbered as 2 and so on till the topmost floor is numbered as 9. Consecutive named persons as per the alphabetical series doesn't live on adjacent floor to each other. Three persons live between I and F who lives on the exact middle floor. Two persons live between H and E who lives just above G. Two persons live between A and D.

Q83. Who among the following persons live on 7th floor?
(a) H
(b) B
(c) I
(d) C
(e) D

Q84. How many persons live between I and D?
(a) One
(b) Three
(c) Four
(d) Two
(e) More than four

Q85. Who among the following lives three floors above G?
(a) H
(b) F
(c) C
(d) D
(e) I

Q86. Four of the following five are a like in a certain way and thus forms a group, then who among the following doesn't belong to that group?
(a) C
(b) B
(c) E
(d) D
(e) F

Q87. Who among the following lives just below A?
(a) F
(b) D
(c) G
(d) E
(e) I

Directions (88-92): In each of the questions some statements are given below followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Q88. Statements:
Only a few U is K
No K is I
Each I is R.
Conclusions:
I. Some R is not K
II. All U can be I
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q89. Statements:
All Soo is Hoo
All Hoo is Koo
A few Koo is Loo
Conclusions:
I. Some Loo can be Hoo
II. Some Soo is not Loo
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q90. Statements:
Some Singer are Raper.
Only a few Raper is Dancer.
All Dancer are Artist
Conclusions:
I. Some singer is not artist
II. All dancer is singer
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q91. Statements:
Only Train is Tata
83.5% Train is Toyota
None Toyota is Tokyo
Conclusions:
I. No Tata is Tokyo
II. Some Train is not Tokyo
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q92. Statements:
Some Style is Font
No size is Style
0% Font is Edit
Conclusions:
I. Some Style can be Edit
II. No Edit is Size
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Directions (93-96): Study the following information carefully and answer the questions given below.
Seven persons P, Q, R, S, T, U, and V have different heights. Equal number of persons is taller and shorter than P. S is taller than R and U. Only V and T are taller than Q. R is not the shortest. T is not taller than V.

Q93. How many persons are taller than S?
(a) One
(b) Two
(c) Three
(d) Four
(e) None of the above

Q94. Who among the following is tallest?
(a) S
(b) R
(c) V
(d) T
(e) Cannot be determined

Q95. If the height of T is 36cm and height of R is 25cm, then what will be the possible height of Q cm?
(a) 37 cm
(b) 20 cm
(c) 30 cm
(d) 14 cm
(e) Can't be determined

Q96. Who is just shorter than P?
(a) T
(b) S
(c) U
(d) Either R or U
(e) Either T or U

Q97. If we form a four-letter meaningful word with 1st, 3rd, 6th, and 8th letter from the left end of the word ''**ROOMMATE''** (using one letter once), then what would be the third letter of that meaningful word? If no meaningful word is formed, then mark the answer as X. If more than one meaningful word is formed then, mark the answer as Z.
(a) R
(b) A
(c) E
(d) X
(e) Z

Directions (98-100): Study the following information carefully and answer the questions given below.
A person starts walking from point F towards the west. After walking for 27m he reaches point D. From point D he takes a left turn and walks for another 20m and reaches point C. From point C he turns right and walks for another 27m and reaches point B. From point B he takes a right turn of 10m and reach at point A.

Q98. In which direction is person's final point with respect to point F?
(a) South
(b) South-west
(c) North
(d) North-west
(e) None of these

Q99. If point S is exactly between point C and point D, how far and in which direction is point S with respect to point A?
(a) 10m, west
(b) 20m, east
(c) 27m, west
(d) 27m, east
(e) None of these

Q100. In which direction is point B with respect to point D?
(a) South
(b) South-west
(c) North-east
(d) North-west
(e) None of these

Solutions

S1. Ans.(b)
Sol. The correct sequence of the phrases is 'BADC'. Therefore the meaningful sentence will be, "Ayurveda is considered as one of the oldest of the traditional systems of medicine accepted worldwide.

S2. Ans.(c)
Sol. The correct sequence of the phrases is 'CDAB'. Therefore the meaningful sentence will be, "Wood was the earliest fuel used in places where only moderate warmth was needed, such as China and Japan."

S3. Ans.(d)
Sol. The correct sequence of the phrases is 'CBAD'. Therefore the meaningful sentence will be, "All practitioners of medicine need to keep abreast of evolving knowledge in medicine to provide competent care to patients."

S4. Ans.(c)
Sol. The correct sequence of the phrases is 'ACDB'. Therefore the meaningful sentence will be, "Every day, thousands of books are released in the market ranging from travel books to fictional books".

S5. Ans.(d)
Sol. The correct word for the blank is 'explosive'.
(a) renouncing means formally declare one's abandonment of (a claim, right, or possession).
(b) Obstructive means causing a blockage or obstruction.
(c) baffling means impossible to understand; perplexing.
(d) explosive means able or likely to shatter violently or burst apart.
(e) trembling means shaking or quivering, typically as a result of anxiety, excitement, or frailty.

S6. Ans.(b)
Sol. The correct word for the blank is 'transparent'.
(a) coarse means rough or harsh in texture.
(b) transparent means allowing light to pass through so that objects behind can be distinctly seen.
(c) ambiguous means not clear or decided.
(d) reflect means throw back (heat, light, or sound) without absorbing it.
(e) malicious means characterized by malice; intending or intended to do harm

S7. Ans.(c)
Sol. The correct word for the blank is 'array'.
(a) coercion means the practice of persuading someone to do something by using force or threats.
(b) incumbent means necessary for (someone) as a duty or responsibility.
(c) array means an ordered series or arrangement.
(d) atrocity means an extremely wicked or cruel act, typically one involving physical violence or injury.
(e) stark means severe or bare in appearance or outline

S8. Ans.(e)
Sol. The correct word for the blank is 'resembles'.
(a) mitigate means make (something bad) less severe, serious, or painful.
(b) fraught means filled with or likely to result in (something undesirable).
(c) overlook means fail to notice.
(d) revert means return to (a previous state, practice, topic, etc.).
(e) resembles means have a similar appearance to or qualities in common with (someone or something); look or seem like.

S9. Ans.(a)
Sol. The correct word for the blank is 'contamination'.
(a) contamination means the action or state of making or being made impure by polluting or poisoning.
(b) mishaps means an unlucky accident.
(c) ferocity means the state or quality of being savagely fierce, cruel, or violent.
(d) catastrophic means involving or causing sudden great damage or suffering.
(e) amalgamation means the action, process, or result of combining or uniting.

S10. Ans.(b)
Sol. The correct choice can be inferred from the lines of the first paragraph which mention, "Submarine, any naval vessel that is capable of propelling itself beneath the water as well as on the water's surface. This is a unique capability among warships, and submarines are quite **different** in design and appearance from surface ships."

S11. Ans.(b)
Sol. The correct choice can be inferred from the lines of the first paragraph which mention, "Submarines first became a major factor in naval warfare during World War I, when Germany employed them to destroy surface merchant vessels. In such attacks submarines were used as their primary weapon, a self-propelled underwater missile known as a torpedo."

S12. Ans.(e)
Sol. All the given statements are correct with reference to the second paragraph which mentions, "Bourne proposed a completely enclosed boat that could be submerged and rowed underwater. It consisted of a wooden frame covered with waterproof leather; it was to be submerged by reducing its volume by contracting the sides through the use of hand vises."

S13. Ans.(d)
Sol. By going through the last paragraph, we can infer that all the given options are correct.

S14. Ans.(c)
Sol. Statement (i) and statement (ii) are incorrect.
For statement (i), refer to the lines of second paragraph which mentions, "Bourne did not actually construct his boat, and Cornelis Drebbel, a Dutch inventor, is usually credited with building the first submarine."
For statement (ii), refer to the lines of the third paragraph which mentions, "In an effort to overcome the problems of propulsion, two French naval officers built the 146-foot submarine Le Plongeur in 1864, powered by an 80-horsepower compressed-air engine, but the craft quickly exhausted its air tanks whenever it got under way."
For statement (iii), refer to the lines of first paragraph which mentions, "Submarines first became a major factor in naval warfare during World War I, when Germany employed them to destroy surface merchant vessels. In such attacks submarines used as their primary weapon, a self-propelled underwater missile known as a torpedo."

S15. Ans.(d)
Sol. 'Recurrent' is a synonym of 'repeated'.
revolved means move in a circle on a central axis.
reinforced means strengthen or support (an object or substance), especially with additional material.
retracted means draw back
recurrent means occurring often or repeatedly.

S16. Ans.(b)
Sol. 'Analogous' is an antonym of 'different'.
colossal means extremely large or great.
analogous means similar or comparable to something else either in general or in some specific detail
mount means climb up (stairs, a hill, or other rising surface).
conspire means make secret plans jointly to commit an unlawful or harmful act.

S17. Ans.(b)
Sol. The error is in part (C). Here 'of' should be removed as 'despite' is never followed by 'of'. The word despite is a preposition which takes a noun as its object, and it would be redundant to use another preposition with it.

S18. Ans.(a)
Sol. The error is in part (A). Use of 'back' after return is superfluous. Return itself means 'come or go back to a place or person'.

S19. Ans.(c)
Sol. The error is in part (A). Here 'interesting' should be replaced with 'interested'.
Interesting means arousing curiosity or interest; holding or catching the attention.
Interested means showing curiosity or concern about something or someone; having a feeling of interest.

S20. Ans.(a)
Sol. Part (A) is erroneous. Here 'has' should be replaced with 'had'. The sentence is conditional sentence and its correct structure should be, 'If+ Sub+ had+ V3'.

S21. Ans.(e)
Sol. The given sentence is error-free.

S22. Ans.(c)
Sol. Coherent sentences can be formed by joining (B)-(F) and (C)-(D). Therefore the sentences will be "The best-known benefit of sunlight is its ability to boost the body's vitamin D supply" and "The consumption of petroleum products has increased sharply in the last decades"

S23. Ans.(b)
Sol. Coherent sentence can be formed by joining (B)-(F). Therefore the sentence will be "When you work on a computer, your eyes have to focus and refocus all the time."

S24. Ans.(d)
Sol. Coherent sentences can be formed by joining (A)-(E) and (C)- (F). Therefore the sentences will be, "A family member was staying up late to watch again even though she knows the movie by heart"
"The cause of lethargy may be clear based on its pattern and accompanying symptoms"

S25. Ans.(a)
Sol. Coherent sentences can be formed by joining (A)-(F) and (C)- (D). Therefore the sentence will be, "In smaller mines with less regulation, health and safety risks are much higher"
"The term low and middle-income country is often used interchangeably"

S26. Ans.(b)
Sol. Coherent sentence can be formed by joining (C)- (F). Therefore the sentence will be, "The president is responsible for chairing meetings of the boards of directors"

S27. Ans.(c)
Sol. The word 'execute' means 'put (a plan, order, or course of action) into effect' and sentence (ii) and sentence (iii) have its correct usage.

S28. Ans.(d)
Sol. 'Fuming' means 'feeling, showing, or expressing great anger' and it has been used correctly in sentence (i) and sentence (ii).

S29. Ans.(e)
Sol. 'Timid' means 'showing a lack of courage or confidence; easily frightened' and its usage is correct only in statement (iii).

S30. Ans.(a)
Sol. 'Invent' means 'to think of or make something for the first time' and its usage is correct only in statement (ii).

S31. Ans.(b)
Sol.
Number of lily plants in R = 600
Let total number of plants be 100x
Number of lily plants in R = $100x \times \frac{25}{100} \times \frac{50}{100} = 12.5x$
Total number of plants = $\frac{600}{12.5x} \times 100x = 4800$
Number of jade plants in P = $4800 \times \frac{20}{100} \times \frac{45}{100} = 432$
Number of jade plants in S = $4800 \times \frac{10}{100} \times \frac{30}{100} = 144$
Req. sum = 432+144 = 576

S32. Ans.(a)
Sol.
Let total number of plants be 100x
ATQ.
$100x \times \frac{30}{100} \times \frac{40}{100} - 100x \times \frac{15}{100} \times \frac{60}{100} = 72$
$12x - 9x = 72$
$x = 24$
Number of lily plants in P = $24 \times 100 \times \frac{20}{100} \times \frac{55}{100} = 264$

S33. Ans.(e)
Sol.
Let total number of plants be 100x
Number of jade plants in Q = $100x \times \frac{15}{100} \times \frac{60}{100} = 9x$
ATQ.
$9x = 108$
$x = 12$
Total number of plants in X = $12 \times 100 \times \frac{10}{100} \times \frac{125}{100} = 150$
Number of lily plants in X = $1200 \times \frac{20}{100} \times \frac{55}{100} \times \frac{2}{3} = 88$
Number of jade plants in X = 150 – 88 = 62

S34. Ans.(d)
Sol. Let total number of plants be 100x
ATQ.
$100x \times \frac{30}{100} = 90$
$x = 3$
Number of jade plants in S = $300 \times \frac{10}{100} \times \frac{30}{100} = 9$
Number of jade plants in Q = $300 \times \frac{15}{100} \times \frac{60}{100} = 27$
Req. average = $\frac{9+27}{2} = 18$

S35. Ans.(e)
Sol.
Let total number of plants be 100x
ATQ.
$$100x \times \frac{30}{100} \times \frac{60}{100} = 432$$
$$x = 24$$
Number of aloe vera plants in P = $2400 \times \frac{25}{100} \times \frac{50}{100} \times \frac{28}{100} = 84$
Number of jade plants in Q = $2400 \times \frac{15}{100} \times \frac{60}{100} = 216$
Req. ratio = 216:84 = 18:7

S36. Ans.(d)
Sol.
I. $x^2 - 4x - 21 = 0$
$x^2 - 7x + 3x - 21 = 0$
$x = 7, -3$
II. $y^2 - 15y + 56 = 0$
$y^2 - 7y - 8y + 56 = 0$
$y = 7, 8$
So, x≤y

S37. Ans.(e)
Sol.
I. $2x^2 - 17x - 19 = 0$
$2x^2 + 2x - 19x - 19 = 0$
$x = -1, 9.5$
II. $3y^2 + 8y - 11 = 0$
$3y^2 + 11y - 3y - 11 = 0$
$y = -\frac{11}{3}, 1$
So, no relation can be established between x and y.

S38. Ans.(e)
Sol.
I. $7x^2 - 18x - 25 = 0$
$7x^2 + 7x - 25x - 25 = 0$
$x = \frac{25}{7}, -1$
II. $9y^2 - 15y - 14 = 0$
$9y^2 - 21y + 6y - 14 = 0$
$y = \frac{7}{3}, -\frac{2}{3}$
So, no relation can be established between x and y.

S39. Ans.(d)
Sol.
I. $x^2 - 57 = 304$
$x^2 = 361$
$x = -19, 19$
II. $y = \sqrt{361}$
$y = 19$
So, x≤y

S40. Ans.(a)
Sol.

I. $x = \sqrt{(18 \times 4) - 16 \div 2}$
$x = \sqrt{72 - 8}$
$x = 8$
II. $y^2 = 13y - 42$
$y^2 - 7y - 6y + 42 = 0$
$y = 7, 6$
So, x>y

S41. Ans.(e)
Sol. Let total people who like only food X, only food Y and only food Z be 5a, 7a & 3a respectively
And total student who like all three foods $= \frac{7a}{2} = 3.5a$
$(5a + 7a + 3a + 3.5a) + 50 + 30 = 450$
$18.5a = 370$
$a = 20$
Required sum $= 3 \times 20 + 5 \times 20 = 160$

S42. Ans.(d)
Sol. Let total people who like only food X, only food Y and only food Z be 5a, 7a & 3a respectively
And total student who like all three foods $= \frac{7a}{2} = 3.5a$
$(5a + 7a + 3a + 3.5a) + 50 + 30 = 450$
$18.5a = 370$
$a = 20$
Number of people who like only food Y = 140
Number of people who like only food X & food Y are can't be determined.

S43. Ans.(a)
Sol. Let total people who like only food X, only food Y and only food Z be 5a, 7a & 3a respectively
And total student who like all three foods $= \frac{7a}{2} = 3.5a$
$(5a + 7a + 3a + 3.5a) + 50 + 30 = 450$
$18.5a = 370$
$a = 20$
Number of people who like only food X & food Y = $50 \times \frac{2}{5} = 20$
Number of people who like only food Y & food Z = $50 \times \frac{3}{5} = 30$
Number of people who like food X = $100 + 30 + 70 + 20 = 220$
Number of people who like food Z = $60 + 30 + 70 + 30 = 190$
Req. ratio = 220:190= 22:19

S44. Ans.(d)
Sol. Let total people who like only food X, only food Y and only food Z be 5a, 7a & 3a respectively
And total student who like all three foods $= \frac{7a}{2} = 3.5a$
$(5a + 7a + 3a + 3.5a) + 50 + 30 = 450$
$18.5a = 370$
$a = 20$
Requires number = $30 + 50 + 70 = 150$

S45. Ans.(b)
Sol. Let total people who like only food X, only food Y and only food Z be 5a, 7a & 3a respectively

And total student who like all three foods = $\frac{7a}{2}$ = 3.5a

(5a + 7a + 3a + 3.5a) + 50 + 30 = 450

18.5a = 370

a = 20

Req.% = $\frac{60}{100}$ × 100 = 60%

S46. Ans.(a)
Sol. Let the speed of current be X km/h

ATQ.

$\frac{100}{12 - X} + \frac{100}{12 + X} = 30$

$\frac{100(12 + X + 12 - X)}{144 - X^2} = 30$

$100 \times 24 = 30(144 - X^2)$

$80 = 144 - X^2$

$X^2 = 64$

$X = 8$

S47. Ans.(e)
Sol. Let the present age of X, Y & Z be x, y & z respectively.

ATQ.

$\frac{2}{3}y = \frac{3}{5}z$

$\frac{y}{z} = \frac{9}{10} = \frac{9a}{10a}$

Age of X = (10a-10) years

$10a + 10a - 10 = 90$

$20a = 100$

$a = 5$

Age of X after four years = $10 \times 5 - 10 + 4 = 44$ years

S48. Ans.(a)
Sol.

Let cost price be Rs.100x

Marked price = Rs.160x

Selling price = Rs.128x

Discount % = $\frac{160x - 128x}{160x} \times 100$

$\frac{32x}{160x} \times 100 = 20\%$

ATQ.

4d=20

d=5

New selling price = $160x \times \frac{100 - (6 \times 5)}{100} = 112x$

Profit % = $\frac{112x - 100x}{100x} \times 100 = 12\%$

S49. Ans.(d)
Sol.

Profit sharing ratio of P, Q & R

$(X + 6000) \times 12 : 6000 \times 8 : \dfrac{X + 6000}{2} \times 4$

$(X + 6000) \times 3 : 6000 \times 2 : \dfrac{X + 6000}{2}$

ATQ.

$\dfrac{(X + 6000)}{2(3X + 18000 + 12000)} = \dfrac{2200}{18000}$

$\dfrac{X + 6000}{3X + 30000} = \dfrac{11}{45}$

$45X + 270000 = 33X + 330000$

$12X = 60000$

$X = 5000$

S50. Ans.(b)
Sol.

Area of walls $= \dfrac{44800}{40} = 1120 \ m^2$

ATQ.

$2(l + b) \times h = 1120$

$2(14x) \times 20 = 1120$

$x = 2$

Breadth of the room = 6x = 12 meters

S51. Ans.(c)
Sol.

19,	22,	51,	178,	?=523	1254
$+(1^3 + 2)$	$+(3^3 + 2)$	$+(5^3 + 2)$	$+(7^3 + 2)$	$+(9^3 + 2)$	

S52. Ans.(d)
Sol.

$205 - 19 = 186$

$186 - 38 = 148$

$148 - 57 = 91$

$91 - 76 = 15$

$15 - 95 = -80$

S53. Ans.(e)
Sol.

14,	20,	28,	40,	60,	?=96
+6	+8	+12	+20	+36	
2^1	2^2	2^3	2^4		

S54. Ans.(c)
Sol.

45,	59,	79,	106,	?=141,	185
+14	+20	+27	+35	+44	
+6	+7	+8	+9		

S55. Ans.(e)

Sol.

$48 \times 0.5 = 24$

$24 \times 1 = 24$

$24 \times 1.5 = 36$

$36 \times 2 = 72$

$72 \times 2.5 = 180$

S56. Ans.(d)

Sol.

Total number of students = 550

Number of boys = $550 \times \frac{60}{100} = 330$

Number of girls = $550 \times \frac{40}{100} = 220$

Similarly,

Schools	Total number of students	Number of boys	Number of girls
A	550	330	220
B	480	180	300
C	600	195	405
D	780	312	468
E	700	400	300

Number of girls who participated in cricket = $405 \times \frac{5}{9} = 225$

Number of girls who participated in volleyball = $405 \times \frac{4}{9} = 180$

Number of boys who participated in cricket = $225 \times \frac{20}{100} = 45$

Number of boys who participated in volleyball = $195 - 45 = 150$

Req. sum = 150+180 = 330

S57. Ans.(e)

Sol.

Total number of students = 550

Number of boys = $550 \times \frac{60}{100} = 330$

Number of girls = $550 \times \frac{40}{100} = 220$

Similarly,

Schools	Total number of students	Number of boys	Number of girls
A	550	330	220
B	480	180	300
C	600	195	405
D	780	312	468
E	700	400	300

Req. ratio = 468:330 = 78:55

S58. Ans.(d)
Sol.

Total number of students = 550

Number of boys = $550 \times \frac{60}{100} = 330$

Number of girls = $550 \times \frac{40}{100} = 220$

Similarly,

Schools	Total number of students	Number of boys	Number of girls
A	550	330	220
B	480	180	300
C	600	195	405
D	780	312	468
E	700	400	300

Number of boys in school D $= 312 + 180 \times \frac{25}{100} = 357$

Number of girls in school D $= 468 + 300 \times \frac{40}{100} = 588$

Req. difference = 588 – 357 = 231

S59. Ans.(a)
Sol.

Total number of students = 550

Number of boys = $550 \times \frac{60}{100} = 330$

Number of girls = $550 \times \frac{40}{100} = 220$

Similarly,

Schools	Total number of students	Number of boys	Number of girls
A	550	330	220
B	480	180	300
C	600	195	405
D	780	312	468
E	700	400	300

Number of girls in school X = $300 \times \frac{72}{100} = 216$

Number of boys in school X = $180 \times \frac{31}{36} = 155$

Total number of students in school X = 216+155 = 371

S60. Ans.(b)
Sol.

Total number of students = 550

Number of boys = $550 \times \frac{60}{100} = 330$

Number of girls = $550 \times \frac{40}{100} = 220$

Similarly,

Schools	Total number of students	Number of boys	Number of girls
A	550	330	220
B	480	180	300
C	600	195	405
D	780	312	468
E	700	400	300

Average number of boys in schools A, B & D = $\frac{330+180+312}{3}$ = 274

Req. % = $\frac{274}{300} \times 100 = 91\frac{1}{3}\%$

S61. Ans.(e)

Sol.

Let total number of pages be 100x

Pages read in first day = $100x \times \frac{20}{100} = 20x$

Pages read in second day = $(100x - 20x) \times \frac{25}{100} = 20x$

ATQ,

$100x - 20x - 20x = 180$

$60x = 180$

$x = 3$

Total pages = 100x = 300

S62. Ans.(d)

Sol.

Composite compound interest = $\left(10 + 10 + \frac{10 \times 10}{100}\right)\% = 21\%$

ATQ.

$\frac{5600 \times R \times 4}{100} - \frac{21}{100} \times 4800 = 672$

$224R = 1680$

$R = 7.5$

Req. value = 7.5+2.5 = 10

S63. Ans.(b)

Sol.

Let total work (L.C.M. of 20 & 28) = 140 units

Efficiency of X and Y is 7 units/day and 5 units/day respectively.

Efficiency of Z = $7 \times \frac{9}{7} = 9$ units/day

Efficiency of W = $5 \times \frac{6}{5} = 6$ units/day

New efficiency of Z = $9 \times \frac{10}{9} = 10$ units/day

New Efficiency of Y = $5 \times \frac{4}{5} = 4$ units/day

Req. days = $\frac{140}{4+10+6} = 7$ days

S64. Ans.(d)

Sol.

Let quantity of milk and water be 8x & 5x respectively.

ATQ.

$\frac{8x + 15}{5x - 15} = \frac{2}{1}$

$8x + 15 = 10x - 30$

$2x = 40$

$x = 20$

Req. quantity = $\frac{40}{100} \times (8 \times 20) = 64$ liters

S65. Ans.(b)
Sol.
Total height of 24 students = $24 \times 162 = 3888$
ATQ.
$18 \times 2x + 6 \times 3x = 3888$
  $54x = 3888$
  $x = 72$
Total height of last 6 students = $72 \times 3 = 216$ cm

S66. Ans.(e)
Sol. Four boxes are kept between box V and box D which is kept just above box K. Box V is numbered as the multiple of 3. Two possibilities arise from this statement: -
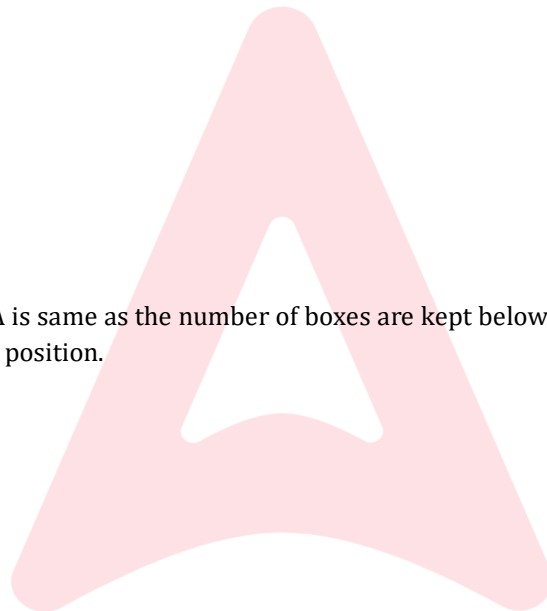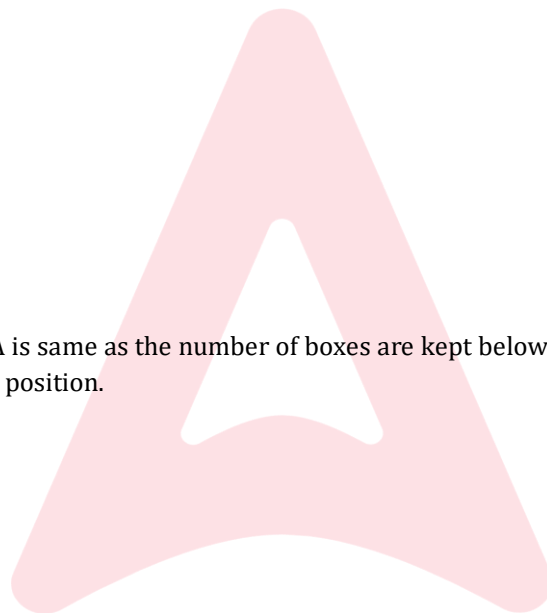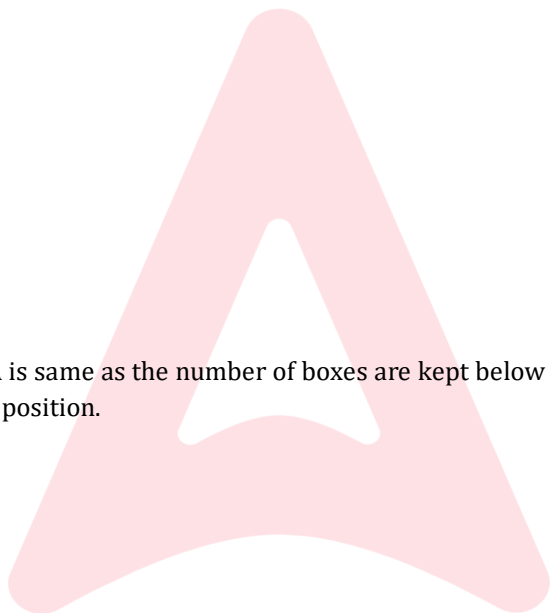
Number	Boxes Case 1	Boxes Case 2
9	V	
8		D
7		K
6		
5		
4	D	
3	K	V
2		
1		

Number of boxes are kept above box A is same as the number of boxes are kept below box Y. Box Y is kept three places below box Q which is not kept at the topmost position.

Number	Boxes Case 1	Boxes Case 2
9	V	A
8	A	D
7		K
6		
5	Q	
4	D	Q
3	K	V
2	Y	
1		Y

More than four boxes are kept between box S and box M which is kept below box C but not just below, so case 2 is ruled out here.

Number	Boxes Case 1	~~Boxes Case 2~~
9	V	~~A~~
8	A	~~D~~
7	S	~~K~~
6	C	
5	Q	
4	D	~~Q~~
3	K	~~V~~
2	Y	
1	M	~~Y~~

Thus, the final arrangement is: -

Number	Boxes
9	V
8	A
7	S
6	C
5	Q
4	D
3	K
2	Y
1	M

Box S and box Q is kept just above and just below box C respectively.
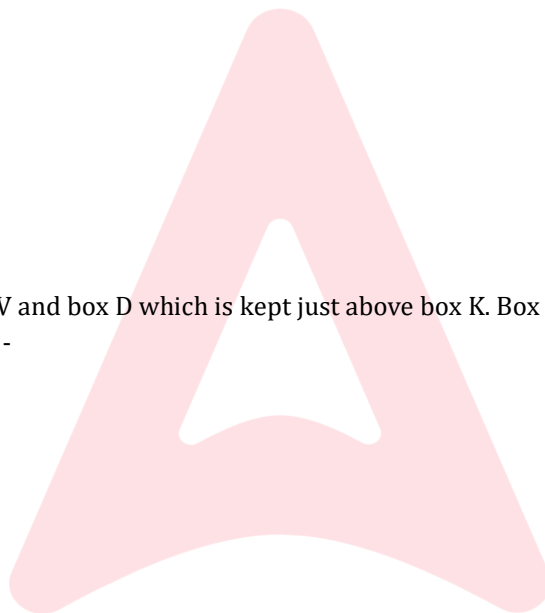
S67. Ans.(c)
Sol. Four boxes are kept between box V and box D which is kept just above box K. Box V is numbered as the multiple of 3. Two possibilities arise from this statement: -

Number	Boxes Case 1	Boxes Case 2
9	V	
8		D
7		K
6		
5		
4	D	
3	K	V
2		
1		

Number of boxes are kept above box A is same as the number of boxes are kept below box Y. Box Y is kept three places below box Q which is not kept at the topmost position.

Number	Boxes Case 1	Boxes Case 2
9	V	A
8	A	D
7		K
6		
5	Q	
4	D	Q
3	K	V
2	Y	
1		Y

More than four boxes are kept between box S and box M which is kept below box C but not just below, so case 2 is ruled out here.

Number	Boxes Case 1	~~Boxes Case 2~~
9	V	~~A~~
8	A	~~D~~
7	S	~~K~~
6	C	
5	Q	
4	D	~~Q~~
3	K	~~V~~
2	Y	
1	M	~~Y~~

Thus, the final arrangement is: -

Number	Boxes
9	V
8	A
7	S
6	C
5	Q
4	D
3	K
2	Y
1	M

Number of boxes kept below box K is same as the number of boxes kept above box S.

S68. Ans.(d)
Sol. Four boxes are kept between box V and box D which is kept just above box K. Box V is numbered as the multiple of 3. Two possibilities arise from this statement: -

Number	Boxes Case 1	Boxes Case 2
9	V	
8		D
7		K
6		
5		
4	D	
3	K	V
2		
1		

Number of boxes are kept above box A is same as the number of boxes are kept below box Y. Box Y is kept three places below box Q which is not kept at the topmost position.

Number	Boxes Case 1	Boxes Case 2
9	V	A
8	A	D
7		K
6		
5	Q	
4	D	Q
3	K	V
2	Y	
1		Y

More than four boxes are kept between box S and box M which is kept below box C but not just below, so case 2 is ruled out here.

Number	Boxes Case 1	~~Boxes Case 2~~
9	V	~~A~~
8	A	~~D~~
7	S	~~K~~
6	C	
5	Q	
4	D	~~Q~~
3	K	~~V~~
2	Y	
1	M	~~Y~~

Thus, the final arrangement is: -

Number	Boxes
9	V
8	A
7	S
6	C
5	Q
4	D
3	K
2	Y
1	M

Two boxes are kept between box M and box D.

S69. Ans.(a)
Sol. Four boxes are kept between box V and box D which is kept just above box K. Box V is numbered as the multiple of 3. Two possibilities arise from this statement: -

Number	Boxes Case 1	Boxes Case 2
9	V	
8		D
7		K
6		
5		
4	D	
3	K	V
2		
1		

Number of boxes are kept above box A is same as the number of boxes are kept below box Y. Box Y is kept three places below box Q which is not kept at the topmost position.

Number	Boxes Case 1	Boxes Case 2
9	V	A
8	A	D
7		K
6		
5	Q	
4	D	Q
3	K	V
2	Y	
1		Y

More than four boxes are kept between box S and box M which is kept below box C but not just below, so case 2 is ruled out here.

Number	Boxes Case 1	~~Boxes Case 2~~
9	V	~~A~~
8	A	~~D~~
7	S	~~K~~
6	C	
5	Q	
4	D	~~Q~~
3	K	~~V~~
2	Y	
1	M	~~Y~~

Thus, the final arrangement is: -

Number	Boxes
9	V
8	A
7	S
6	C
5	Q
4	D
3	K
2	Y
1	M

No box will remain at same place.

Boxes	Alphabetical Order
V	A
A	C
S	D
C	K
Q	M
D	Q
K	S
Y	V
M	Y

S70. Ans.(b)
Sol. Four boxes are kept between box V and box D which is kept just above box K. Box V is numbered as the multiple of 3. Two possibilities arise from this statement: -

Number	Boxes Case 1	Boxes Case 2
9	V	
8		D
7		K
6		
5		
4	D	
3	K	V
2		
1		

Number of boxes are kept above box A is same as the number of boxes are kept below box Y. Box Y is kept three places below box Q which is not kept at the topmost position.

Number	Boxes Case 1	Boxes Case 2
9	V	A
8	A	D
7		K
6		
5	Q	
4	D	Q
3	K	V
2	Y	
1		Y

More than four boxes are kept between box S and box M which is kept below box C but not just below, so case 2 is ruled out here.

Number	Boxes	~~Boxes~~
	Case 1	~~Case 2~~
9	V	~~A~~
8	A	~~D~~
7	S	~~K~~
6	C	
5	Q	
4	D	~~Q~~
3	K	~~V~~
2	Y	
1	M	~~Y~~

Thus, the final arrangement is: -

Number	Boxes
9	V
8	A
7	S
6	C
5	Q
4	D
3	K
2	Y
1	M

Box C is kept two places below box A.

S71. Ans.(b)
Sol. There are three such pairs.

EXTINGUISH
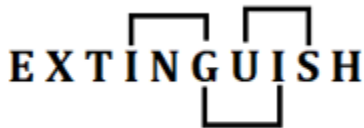
S72. Ans.(a)
Sol. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. There are three possible cases: -
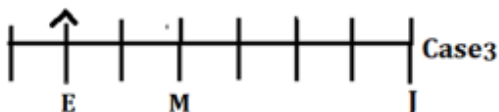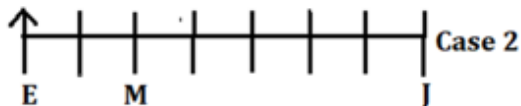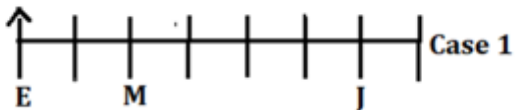
Four persons sit between K and G and both of them face same direction. Case 1 is cancelled here. R sits 2nd to the right of J. R and W doesn't sit adjacent to each other. W sits 3rd to the right of G, Case 3 is cancelled now: -
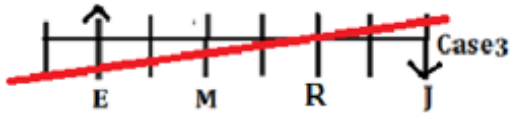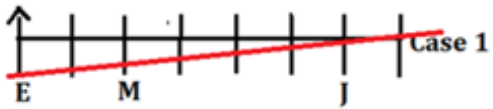
R and P face same direction, it means they will face north as per the given condition i.e., not more than two adjacent persons face same direction. Hence, the final arrangement is: -
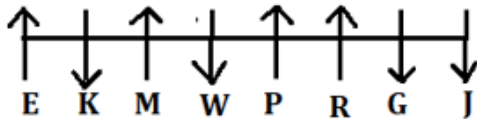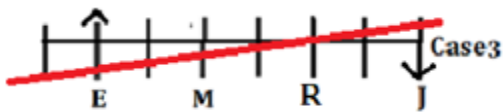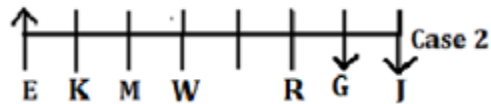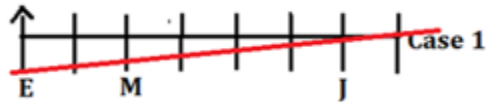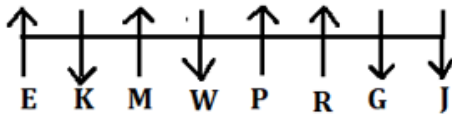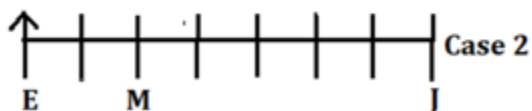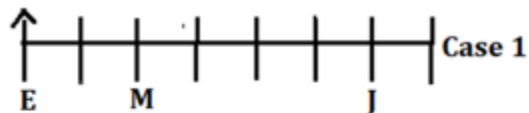

Three persons sit between P and E.

S73. Ans.(d)
Sol. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. There are three possible cases: -

Four persons sit between K and G and both of them face same direction. Case 1 is cancelled here. R sits 2nd to the right of J. R and W doesn't sit adjacent to each other. W sits 3rd to the right of G, Case 3 is cancelled now: -

R and P face same direction, it means they will face north as per the given condition i.e., not more than two adjacent persons face same direction. Hence, the final arrangement is: -

E K M W P R G J
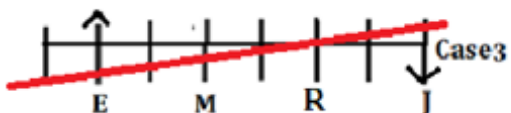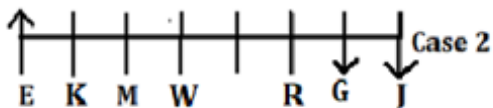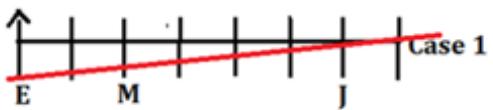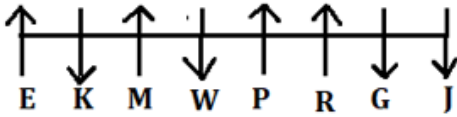
J sits 2ⁿᵈ to the right of R

S74. Ans.(c)
Sol. More than four persons sit between J and E who faces north. M sits 2ⁿᵈ to the right of E. There are three possible cases: -
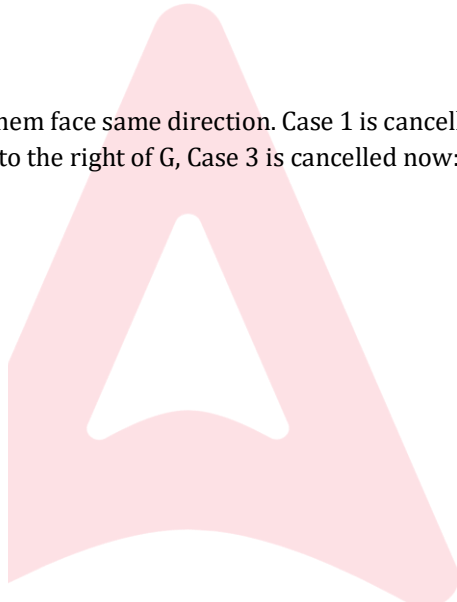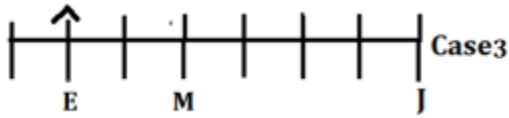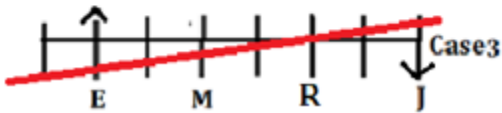

E   M   J   Case 1

E   M   J   Case 2
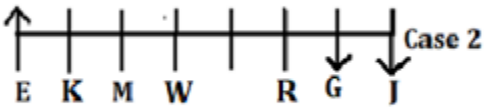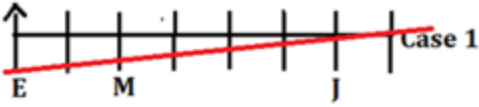

E   M   J   Case3

Four persons sit between K and G and both of them face same direction. Case 1 is cancelled here. R sits 2ⁿᵈ to the right of J. R and W doesn't sit adjacent to each other. W sits 3ʳᵈ to the right of G, Case 3 is cancelled now: -

E   M   J   Case 1

E K M W   R G J   Case 2

E   M   R   J   Case3

R and P face same direction, it means they will face north as per the given condition i.e., not more than two adjacent persons face same direction. Hence, the final arrangement is: -

E K M W P R G J

Only E sits at the extreme left end of the row

S75. Ans.(c)
Sol. More than four persons sit between J and E who faces north. M sits 2ⁿᵈ to the right of E. There are three possible cases: -

E   M   J   Case 1
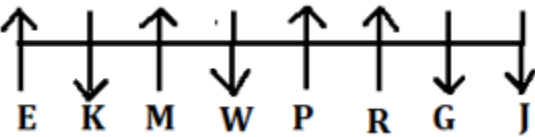

E   M   J   Case 2

Case3

Four persons sit between K and G and both of them face same direction. Case 1 is cancelled here. R sits 2ⁿᵈ to the right of J. R and W doesn't sit adjacent to each other. W sits 3ʳᵈ to the right of G, Case 3 is cancelled now: -
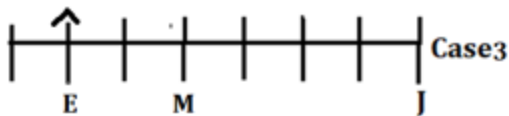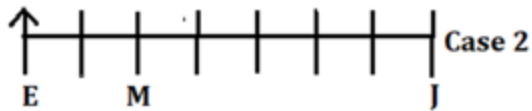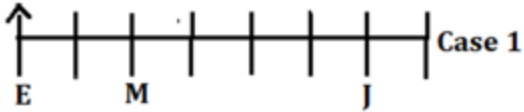

Case 1

Case 2

Case3

R and P face same direction, it means they will face north as per the given condition i.e., not more than two adjacent persons face same direction. Hence, the final arrangement is: -

R sits immediate right of P.

S76. Ans.(c)
Sol. More than four persons sit between J and E who faces north. M sits 2ⁿᵈ to the right of E. There are three possible cases: -

Case 1

Case 2

Case3

Four persons sit between K and G and both of them face same direction. Case 1 is cancelled here. R sits 2ⁿᵈ to the right of J. R and W doesn't sit adjacent to each other. W sits 3ʳᵈ to the right of G, Case 3 is cancelled now: -

Case 1

Case 2

R and P face same direction, it means they will face north as per the given condition i.e., not more than two adjacent persons face same direction. Hence, the final arrangement is: -
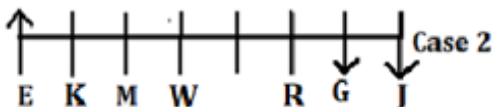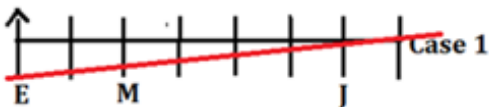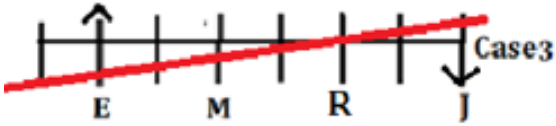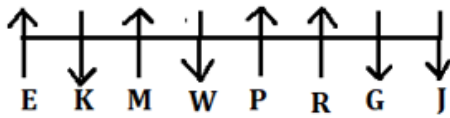

Four persons face south direction.

S77. Ans.(d)
Sol. Given series - 913 586 334 269 772
Sum of 2nd and 3rd digits: 4 14 7 15 9
Hence, only 15 is divisible by 5. Hence, 269 is the correct answer.

S78. Ans.(b)
Sol. Given series - 913 586 334 269 772
After interchanging the position of 2nd and 3rd digits – **931** 568 **343** 296 **727**
Hence, three odd numbers formed.

S79. Ans.(a)
Sol. Given series - 913 586 334 269 772
Digits are arranged in Ascending order –139 568 334 269 277
So, 568 is highest. Hence, 586 is the correct answer.

S80. Ans.(d)
Sol. Given series -913 586 334 269 772
After interchanging the position of 1st and 3rd digits– 319 685 433 **962** 277
So, one even number is formed.

S81. Ans.(c)
Sol. Given series - 913 586 334 269 772
Digits are arranged in Descending order – 931 865 433 962 772
So, 772 is second lowest number. Hence, 772 is the correct answer.

S82. Ans.(e)
Sol. Given number – 5375490356
After interchanging – 3557943065
5th digit from right end and 5th digit from left end – 4 and 9 respectively
Thus, the required difference = 5

S83. Ans.(e)
Sol. Three persons live between I and F who lives on the exact middle floor. Two possibilities arise: -

Floors	Persons (Case 1)	Persons (Case 2)
9	I	
8		
7		
6		
5	F	F
4		
3		
2		
1		I

Two persons live between H and E who lives just above G, they will be place as per the given condition i.e., Consecutive named persons as per the alphabetical series doesn't live adjacent to each other. One more possibility comes from case 2.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	
8		G	
7			
6	H	H	H
5	F	F	F
4			
3	E		E
2	G		G
1		I	I

Two persons live between A and D, so case 2 and case 2a are ruled out here because C and B are left and they can't be adjacent to each other and they will live as per this condition in case 1.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	G
8	B	G	B
7	D	A/D	D
6	H	H	H
5	F	F	F
4	A	D/A	A
3	E	C/B	E
2	G	B/C	G
1	C	I	I

Hence, the final arrangement is: -

Floors	Persons
9	I
8	B
7	D
6	H
5	F
4	A
3	E
2	G
1	C

D lives on the 7th floor.

S84. Ans.(a)
Sol. Three persons live between I and F who lives on the exact middle floor. Two possibilities arise: -

Floors	Persons (Case 1)	Persons (Case 2)
9	I	
8		
7		
6		
5	F	F
4		
3		
2		
1		I

Two persons live between H and E who lives just above G, they will be place as per the given condition i.e., Consecutive named persons as per the alphabetical series doesn't live adjacent to each other. One more possibility comes from case 2.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	
8		G	
7			
6	H	H	H
5	F	F	F
4			
3	E		E
2	G		G
1		I	I

Two persons live between A and D, so case 2 and case 2a are ruled out here because C and B are left and they can't be adjacent to each other and they will live as per this condition in case 1.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	C
8	B	G	B
7	D	A/D	D
6	H	H	H
5	F	F	F
4	A	D/A	A
3	E	C/B	E
2	G	B/C	G
1	C	I	I

Hence, the final arrangement is: -

Floors	Persons
9	I
8	B
7	D
6	H
5	F
4	A
3	E
2	G
1	C

One person lives between I and D.

S85. Ans.(b)
Sol. Three persons live between I and F who lives on the exact middle floor. Two possibilities arise: -

Floors	Persons (Case 1)	Persons (Case 2)
9	I	
8		
7		
6		
5	F	F
4		
3		
2		
1		I

Two persons live between H and E who lives just above G, they will be place as per the given condition i.e., Consecutive named persons as per the alphabetical series doesn't live adjacent to each other. One more possibility comes from case 2.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	
8		G	
7			
6	H	H	H
5	F	F	F
4			
3	E		E
2	G		G
1		I	I

Two persons live between A and D, so case 2 and case 2a are ruled out here because C and B are left and they can't be adjacent to each other and they will live as per this condition in case 1.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	C
8	B	G	B
7	D	A/D	D
6	H	H	H
5	F	F	F
4	A	D/A	A
3	E	C/B	E
2	G	B/C	G
1	C	I	I

Hence, the final arrangement is: -

Floors	Persons
9	I
8	B
7	D
6	H
5	F
4	A
3	E
2	G
1	C

F lives three floors above G.

S86. Ans.(b)
Sol. Three persons live between I and F who lives on the exact middle floor. Two possibilities arise: -

Floors	Persons (Case 1)	Persons (Case 2)
9	I	
8		
7		
6		
5	F	F
4		
3		
2		
1		I

Two persons live between H and E who lives just above G, they will be place as per the given condition i.e., Consecutive named persons as per the alphabetical series doesn't live adjacent to each other. One more possibility comes from case 2.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	
8		G	
7			
6	H	H	H
5	F	F	F
4			
3	E		E
2	G		G
1		I	I

Two persons live between A and D, so case 2 and case 2a are ruled out here because C and B are left and they can't be adjacent to each other and they will live as per this condition in case 1.

Floors	Persons (Case 1)	~~Persons (Case 2)~~	~~Persons (Case 2a)~~
9	I	~~E~~	~~C~~
8	B	~~G~~	~~B~~
7	D	~~A/D~~	~~D~~
6	H	~~H~~	~~H~~
5	F	~~F~~	~~F~~
4	A	~~D/A~~	~~A~~
3	E	~~C/B~~	~~E~~
2	G	~~B/C~~	~~G~~
1	C	~~I~~	~~I~~

Hence, the final arrangement is: -

Floors	Persons
9	I
8	B
7	D
6	H
5	F
4	A
3	E
2	G
1	C

Except B, all the persons live on an odd numbered floor.

S87. Ans.(d)
Sol. Three persons live between I and F who lives on the exact middle floor. Two possibilities arise: -

Floors	Persons (Case 1)	Persons (Case 2)
9	I	
8		
7		
6		
5	F	F
4		
3		
2		
1		I

Two persons live between H and E who lives just above G, they will be place as per the given condition i.e., Consecutive named persons as per the alphabetical series doesn't live adjacent to each other. One more possibility comes from case 2.

Floors	Persons (Case 1)	Persons (Case 2)	Persons (Case 2a)
9	I	E	
8		G	
7			
6	H	H	H
5	F	F	F
4			
3	E		E
2	G		G
1		I	I

Two persons live between A and D, so case 2 and case 2a are ruled out here because C and B are left and they can't be adjacent to each other and they will live as per this condition in case 1.

Floors	Persons (Case 1)	~~Persons (Case 2)~~	~~Persons (Case 2a)~~
9	I	~~E~~	~~C~~
8	B	~~G~~	~~B~~
7	D	~~A/D~~	~~D~~
6	H	~~H~~	~~H~~
5	F	~~F~~	~~F~~
4	A	~~D/A~~	~~A~~
3	E	~~C/B~~	~~E~~
2	G	~~B/C~~	~~G~~
1	C	~~I~~	~~I~~

Hence, the final arrangement is: -

Floors	Persons
9	I
8	B
7	D
6	H
5	F
4	A
3	E
2	G
1	C

E lives just below A.

S88. Ans.(a)
Sol. I. Follows – Because all I is R and no K is I, so the part of R which is I cannot be K.
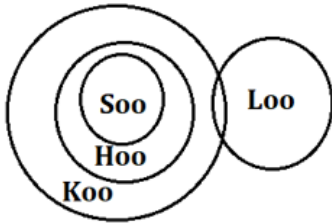II. Not Follows – Because Some U is K and no K is I, so all U cannot be I.
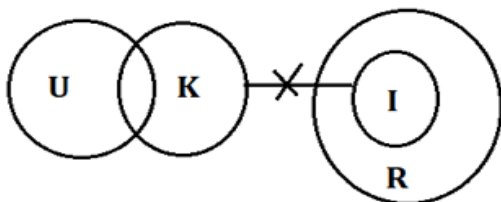
S89. Ans.(a)
Sol. I. Follows – Because there is no direct relation between Hoo and Loo, so their relation will follow in possibilities.
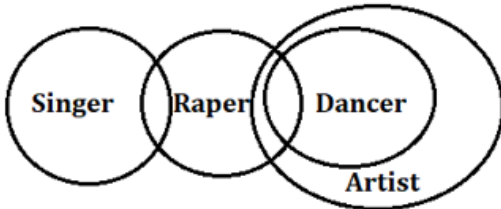II. Not Follows – Because there is no direct relation between Soo and Loo, so definite relation will not follow.

S90. Ans.(d)
Sol. I. Not Follows – Because there is no direct relation between singer and artist, so any definite relation will not follow.
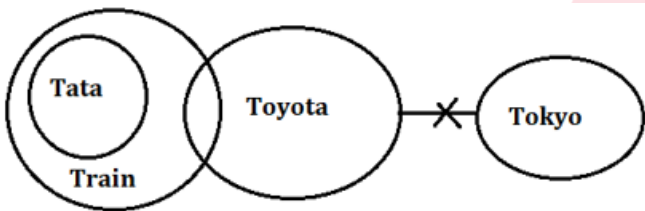II. Not Follows – Because there is no direct relation between singer and Dancer, so any definite relation will not follow.

S91. Ans.(e)
Sol. I. Follows – because tata is only related to train, its relation with any other element will not follow.
II. Follows – because tata is only related to train, so the part of train which is tata cannot be Tokyo. Also, the part of train which is Toyota cannot be Tokyo.

S92. Ans.(a)
Sol. I. Follows – because there is no relation between style and edit, so their relation will follow in possibility.
II. Not follows – because there is no direct relation between size and edit, so any definite relation will not follow.
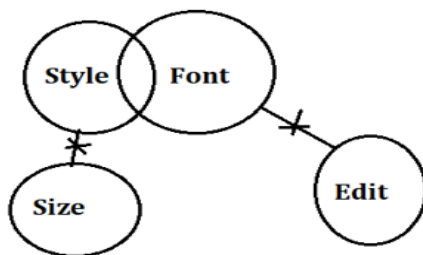
S93. Ans.(d)
Sol. Equal number of persons is taller and shorter than P. S is taller than R and U.

$>\quad >\quad > P >\quad >\quad >$

$S > R/U > R/U$

Only V and T are taller than Q. R is not the shortest.

$V/T > V/T > Q > P > S > R > U$

T is not taller than V. Thus, the final arrangement is: -

V > T > Q > P > S > R > U

Four person are taller than S.

S94. Ans.(c)
Sol. Equal number of persons is taller and shorter than P. S is taller than R and U.

> > > P > > >

S > R/U > R/U

Only V and T are taller than Q. R is not the shortest.

V/T > V/ T > Q > P > S > R > U

T is not taller than V. Thus, the final arrangement is: -

V > T > Q > P > S > R > U

V is the tallest among all.

S95. Ans.(c)
Sol. Equal number of persons is taller and shorter than P. S is taller than R and U.

> > > P > > >

S > R/U > R/U

Only V and T are taller than Q. R is not the shortest.

V/T > V/ T > Q > P > S > R > U

T is not taller than V. Thus, the final arrangement is: -

V > T > Q > P > S > R > U

Height of Q will be 30cm.

S96. Ans.(b)
Sol. Equal number of persons is taller and shorter than P. S is taller than R and U.

> > > P > > >

S > R/U > R/U

Only V and T are taller than Q. R is not the shortest.

V/T > V/ T > Q > P > S > R > U

T is not taller than V. Thus, the final arrangement is: -
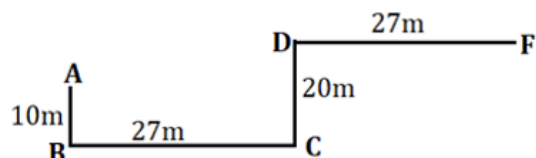
V > T > Q > P > S > R > U

S is just shorter than P

S97. Ans.(a)
Sol. 1st, 3rd, 6th, and 8th letter from the left end of the word – R, O, A and E respectively
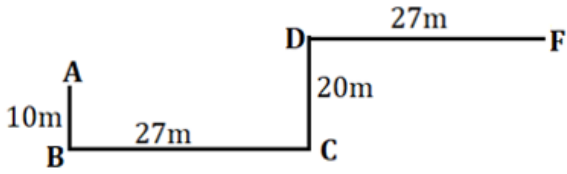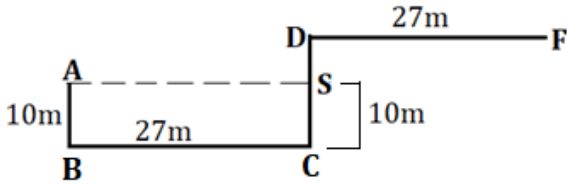One meaningful word is formed – AERO, so 3rd letter is R.

S98. Ans.(b)
Sol.

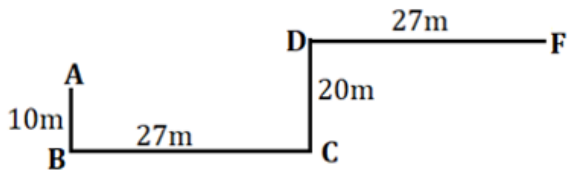Person's final point is in south-west of point F.

S99. Ans.(d)
Sol.

Point S is in 27m east of point A.

S100. Ans.(b)
Sol.

Point B is south-west of point D.